

Supporting Information Appendix

Supplemental Literature

Alcohol intolerance: Biological causes and consequences

When alcohol is ingested into the human body, ethanol is metabolized producing acetaldehyde. This task is performed by alcohol dehydrogenase (ADH) in the liver. Subsequently, acetaldehyde is metabolized to acetate. This process is largely carried out by the enzyme aldehyde dehydrogenase 2 (ALDH2) (1). While acetate is harmless, acetaldehyde is toxic and causes facial flushing, nausea, and tachycardia, which are the main symptoms of the alcohol intolerance. The liver enzymes ADH and ALDH are polymorphic in humans (2). ADH2 and ALDH2 are common in East Asians, and the homozygote ADH2¹ is with high frequency mutated into the super active heterozygote ADH2², while the homozygote ALDH2¹ is mutated into the inactive heterozygote ALDH2², caused by the replacement of Glutamate (Glu) at position 487 with lysine (Lys) (3, 4). The high frequency of ADH2² in Asians causes their bodies to more quickly convert ethanol into acetaldehyde, while the ALDH2² dramatically decreases the speed at which acetaldehyde metabolizes into the harmless acetate. This is the reason for the high frequency of Asian flushing. Overall, about 36% of East Asians are intolerant to alcohol (5).

It has been long known that alcohol intolerance influences drinking behavior and thus, for example, impacts the risk of developing alcoholism. Alcoholics exhibit significantly lower frequencies of the ADH2² and ALDH2² alleles than non-alcoholics (2). The genetic variation in both ADH and ALDH that causes the intolerance, as well as the resulting flushing reaction, accelerated heart rate, and nausea, act to discourage individuals from drinking. In turn, this reduces the risk of alcohol-related problems (6). Evidence of negative relation between alcohol intolerance and alcohol dependence has been found in mainland Chinese (7), Taiwan Chinese (2, 8), Japanese (9, 10) and Korean (11) populations.

Alcohol intolerance increases the risk of several kinds of cancer in East Asians (12). Liver and esophageal cancers were among the first connected to the mutated

genotype of ADH2 and ALDH2. In particular, studies have shown that drinkers with the alcohol intolerance face higher risks for these two types of cancers (13, 14). Recently, gastric cancer has also been tied to the alcohol intolerance (15), as has colorectal (16) and pancreatic cancer (17).*

Explanation of Hypotheses

Hypothesis 1: Males with alcohol intolerance practice self-control in drinking environments more than tolerant males. Female self-control over drinking alcohol is not modulated by alcohol intolerance.

Hypothesis 1 is supported by Hendershot et al. (23) which reports that males with alcohol intolerance develop drinking refusal self-efficacy, and suggested this is because they acquire more experience with refusing opportunities to drink. Because Chinese women are not typically expected to consume alcohol, and thus do not often need to refuse to drink, it is plausible that this finding does not extend to Chinese females. For example, one study found that females' average monthly alcohol consumption is significantly lower than that of males (6.6 ml vs 188.6 ml) and that, unlike males, there are no significant differences in drinking patterns (frequency, amounts consumed) between Chinese women who are and are not alcohol intolerant (7). Other studies report that 3% of Chinese men are alcohol dependent, but only 0.1% of Chinese women (24, 25).

Hypothesis 2: Males intolerant to alcohol and regularly in drinking environments will develop generalized improvement in self-control in relation to otherwise identical tolerant males and intolerant males not regularly exposed to drinking environments. In particular, in relation to alcohol tolerant males and intolerant males not regularly exposed to drinking environments, intolerant males

* It's worth noting that humans' social behavior, and in particular, risky behavior after drinking alcohol, has been studied extensively. Examples include impact on labor productivity (18), relation to risky sexual behavior (19, 20), and propensity to commit violent crimes (21). Recently, Corazzini et al.(22) studied economic behavior under the influence of alcohol. They focused on risk preferences, time perception and altruism after alcohol consumption. They found that alcohol intoxication did not affect risk attitudes, while it did increase impatience and leave people less generous. Our study differs from these in that we focus on whether people with the alcohol intolerance may have developed generalizable self-control strategies rather than investigating immediate effects of alcohol consumption on preferences or decisions.

regularly in drinking environments will demonstrate an improved ability to use willpower to resist selfish temptations.

Hypothesis 2 requires that some males encounter, reasonably regularly, drinking environments. There is substantial evidence this is the case. In China, alcohol is commonly used by males as a part of business meetings, in order to maintain good relations both among and between supervisors and employees, and to promote camaraderie among colleagues (26). Hence, males with alcohol intolerance have an incentive to drink, but prefer to drink only a small amount. This substantial social-pressure requires them to develop skills to resist the impulse to drink, and thus alcohol-intolerant males are more likely to need to practice self-control systematically more than alcohol-tolerant males. Consequently, the strength model of self-control suggests alcohol-intolerant males should be better able to exercise willpower in order to avoid succumbing to selfish temptations.

Hypothesis 3: Female self-control will be modulated neither by alcohol intolerance nor exposure to drinking environments.

Hypothesis 3 again relies on significant gender differences in Chinese drinking culture. As noted gender differences in social pressure to drink are pronounced in China (24, 25, 27). While men may be encouraged to drink, women typically are not and indeed are often strongly discouraged from drinking (24, 25, 10). It follows that females generally need not exercise self-control in drinking environments, and thus their practice of self-control will not systematically differ between those who are and are not tolerant to alcohol, regardless of the frequency of their exposure to such environments. Consequently, the strength model of self-control does not predict differences between tolerant and intolerant females' abilities to exercise willpower.

Supplemental Figures

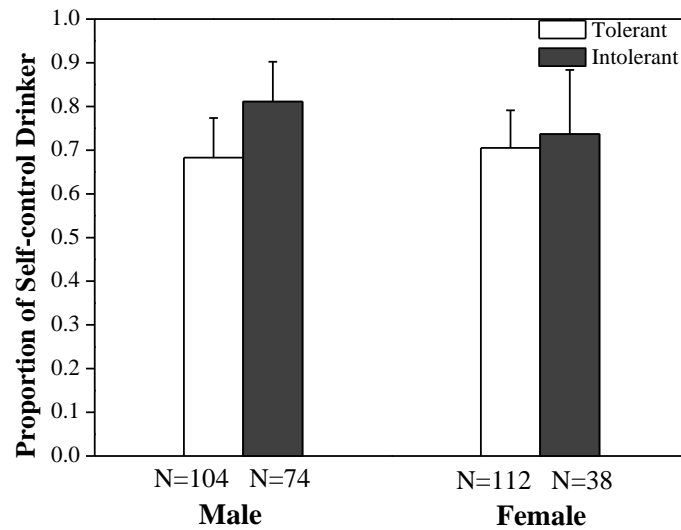


Fig. S1. Proportion of respondents indicating they use self-control in drinking environments by gender and alcohol intolerance. Those indicating no drinking experience are excluded. Differences are marginally statistically significant between tolerant and intolerant males ($t=1.920$, $p=0.056$, two-sided t -test; $z=1.906$, $p=0.057$, two-sided Mann-Whitney test). The difference between tolerant and intolerant females is not significant. Error bars represent 95% Confidence Interval.

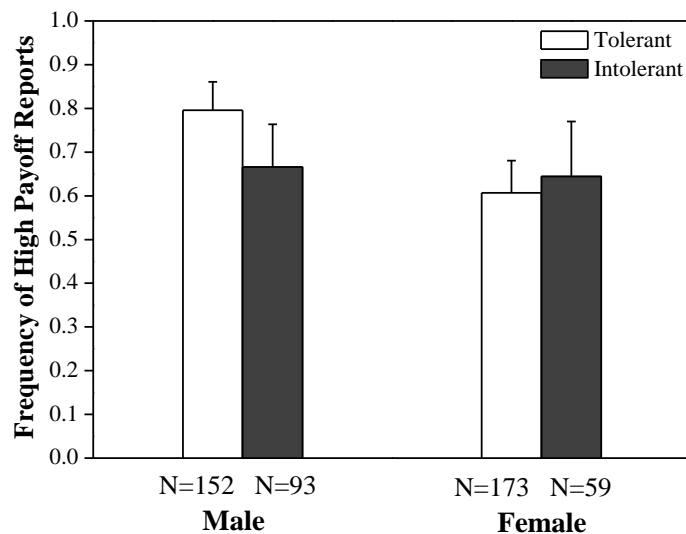


Fig. S2. Frequency of High Payoff Reported by Gender and Presence of Alcohol Intolerance. Frequency of high payoff numbers 3, 4 and 5 reported are statistically significantly different between tolerant and intolerant males ($t=2.275$, $p=0.023$, two sided t -test, same as below) but do not differ between tolerant and intolerant females ($t=0.504$, $p=0.614$). Frequency of high payoff numbers reported are also significantly different between tolerant females and tolerant males ($t=3.764$, $p<0.001$) but do not differ between intolerant females and intolerant males ($t=0.284$, $p=0.776$). Error bars represent 95% confidence intervals.

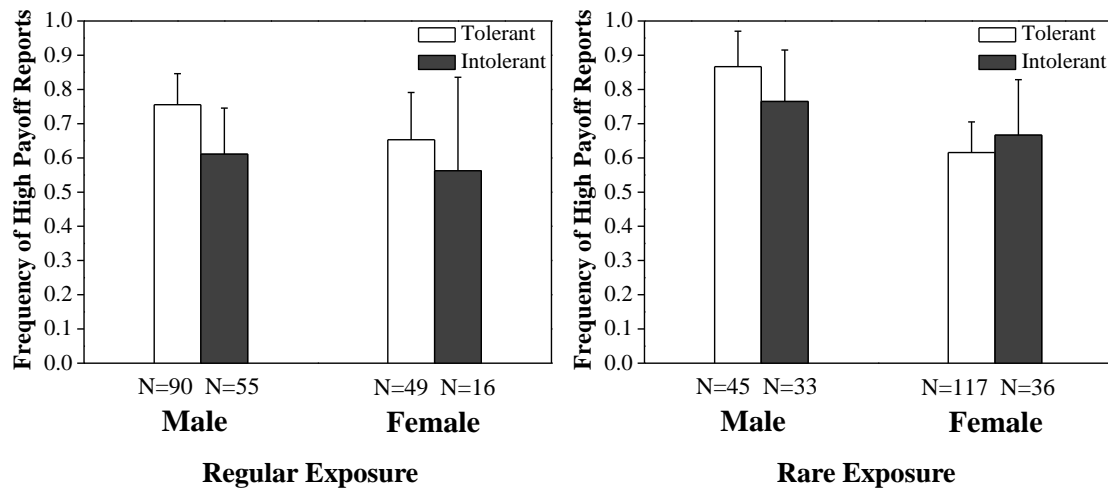


Fig. S3. Frequency of High Payoff Reported by Gender, Alcohol Intolerance and Exposure to Drinking Environments. Regular exposure means participating in a drinking environment one or more times per month; rare exposure is less than this. Frequency of high payoff numbers reported marginally significantly differ between tolerant and intolerant males with regular exposure ($t=1.764$, $p=0.079$), but not between tolerant and intolerant females with regular exposure ($t=0.643$, $p=0.522$). Among those with rare exposure, the frequency of high payoff numbers reported do not significantly differ between tolerant and intolerant males ($t=1.236$, $p=0.220$) nor between tolerant and intolerant females ($t=0.553$, $p=0.580$). Error bars represent 95% confidence intervals.

Supplemental Tables

Table S1. A. Summary Statistics by Alcohol Intolerance and Gender

		Male			Female		
		Intolerant	Tolerant	P value	Intolerant	Tolerant	P value
Demographics	Age	20.07	19.86	<i>0.261</i>	20.30	20.16	<i>0.499</i>
	Grade	2.15	2.07	<i>0.550</i>	2.54	2.33	<i>0.186</i>
Preferences	Altruism	4.88	5.75	<i>0.096</i>	6.03	6.85	<i>0.131</i>
	Risk preference	12.11	12.55	<i>0.493</i>	11.28	10.90	<i>0.556</i>
	Time preference1	27.33	27.84	<i>0.774</i>	30	26.16	<i>0.223</i>
	Time preference2	60.59	61.48	<i>0.309</i>	59.5	60.24	<i>0.409</i>
	Ambiguity aversion	0.65	0.61	<i>0.755</i>	0.72	0.57	<i>0.251</i>
Big Five	Extraversion	24.90	25.93	<i>0.163</i>	23.98	25.59	<i>0.053</i>
	Agreeableness	34.40	35.15	<i>0.205</i>	34.62	35.08	<i>0.506</i>
	Conscientiousness	29.36	29.56	<i>0.775</i>	28.30	28.73	<i>0.595</i>
	Neuroticism	23.97	23.20	<i>0.277</i>	24.28	24.20	<i>0.928</i>
	Openness	34.17	33.86	<i>0.716</i>	33.86	34.38	<i>0.598</i>
Other Personalities	Machiavelli	76.61	76.37	<i>0.880</i>	74.08	72.20	<i>0.300</i>
	Self-Monitoring	9.37	9.46	<i>0.843</i>	9.32	9.05	<i>0.659</i>
	Self-Esteem	24.23	23.59	<i>0.457</i>	25.32	24.17	<i>0.226</i>
	CFC	65.15	66.42	<i>0.433</i>	64.61	64.50	<i>0.950</i>

Table S1. B. Summary Statistics by Exposure to Drinking Environments and Gender

		Male			Female		
		Regular	Rare	P value	Regular	Rare	P value
Demographics	Age	20.02	19.94	<i>0.724</i>	20.40	20.15	<i>0.242</i>
	Grade	2.20	1.94	<i>0.064</i>	2.58	2.30	<i>0.072</i>
Preferences	Altruism	5.65	5.14	<i>0.353</i>	6.43	6.69	<i>0.620</i>
	Risk preference	12.30	12.24	<i>0.928</i>	11.70	10.61	<i>0.084</i>
	Time preference1	28.00	28.23	<i>0.872</i>	29.33	25.20	<i>0.267</i>
	Time preference2	62.04	59.80	<i>0.007</i>	60.22	59.96	<i>0.752</i>
	Ambiguity aversion	0.58	0.77	<i>0.217</i>	0.63	0.60	<i>0.790</i>
Big Five	Extraversion	26.00	24.51	<i>0.055</i>	27.01	24.35	<i>0.001</i>
	Agreeableness	34.80	35.00	<i>0.759</i>	34.86	35.02	<i>0.807</i>
	Conscientiousness	29.17	29.70	<i>0.479</i>	28.58	28.65	<i>0.929</i>
	Neuroticism	23.78	23.25	<i>0.491</i>	23.72	24.55	<i>0.347</i>
	Openness	33.98	33.66	<i>0.712</i>	35.24	33.77	<i>0.129</i>
Other Personalities	Machiavelli	77.02	76.15	<i>0.595</i>	74.00	72.25	<i>0.328</i>
	Self-Monitoring	9.65	8.93	<i>0.116</i>	9.29	9.01	<i>0.617</i>
	Self-Esteem	23.44	24.96	<i>0.100</i>	24.03	24.69	<i>0.474</i>
	CFC	65.01	67.58	<i>0.142</i>	63.29	64.96	<i>0.326</i>

Altruism is measured by the amount of money from 20 Yuan the subject chose to send to an anonymous receiver. Risk preference is measured by the amount of money subjects choose to invest into a risky asset. Time preference1 is the amount of money subjects choose to receive in two weeks instead of tomorrow. Time preference2 indicates how much is needed to delay 50Yuan from tomorrow to one month later. Ambiguity aversion is measured by the rate subjects choose to draw a ball from an urn with known instead of ambiguous distribution. A self-reported frequency of every month or more often is defined to be “Regular” exposure to drinking environments, and otherwise is “Rare” exposure. P-values are based on two-sided t-tests.

Table S2. Use of Self-Control while Drinking by Males and Females and Alcohol Tolerance

Option	Male			Female		
	Unaware	Self-control	Eager to	Unaware	Self-control	Eager to
Tolerant	24(23.1%)	71(68.3%)	9(8.6%)	27(24.1%)	79(70.5%)	6(5.4%)
Intolerant	12(16.2%)	60(81.1%)	2(2.7%)	9(23.7%)	28(73.7%)	1(2.6%)

The data in Table S2 are based on participants' responses to question below. Those indicating no drinking experience are excluded.

Generally speaking, when I am out and after I have had one alcoholic drink:

1. I give little thought to the pace at which I'm drinking (or not drinking) alcohol

2. I use self-control to reduce the pace at which I drink alcohol

3. I become more eager to drink alcohol and drink faster

Table S3. Distribution of Frequency of Exposure to Drinking Environments

Gender		Rare		Regular			Percentage of Regular Exposure
		Never	Yearly	Monthly	Weekly	Daily	
Male	Intolerant	2(2.3%)	31(35.2%)	49(55.7%)	6(6.8%)	0(0)	62.5%
	Tolerant	2(1.5%)	43(31.8%)	85(63.0%)	5(3.7%)	0(0)	66.7%
	P-value						0.526
Female	Intolerant	2(3.8%)	34(65.4%)	15(28.9%)	1(1.9%)	0(0)	30.8%
	Tolerant	7(4.2%)	110(66.3%)	46(27.7%)	2(1.2%)	1(0.6%)	29.5%
	P-value						0.864

Table S4. Logit Regression Analysis of Decisions to Report a High Payoff Number

Dependent variable: self-reported die number 3,4,5=1; 1,2,6=0					
Gender	0.149*** 0.002	0.259*** 0.001	0.163*** 0.001	0.141*** 0.005	0.144*** 0.005
Intolerant	-0.069 0.161				
Regular	-0.062 0.191				
Intolerant*Gender		-0.124 0.221			
Intolerant*Regular		-0.034 0.712			
Gender*Regular		-0.136 0.135			
Intolerant*Gender*Regular			-0.189** 0.020	-0.190** 0.021	-0.200** 0.018
Age				-0.005 0.719	-0.006 0.709
Altruism				-0.015** 0.017	-0.013* 0.051
Risk				0.005 0.350	0.005 0.314
Extraversion					0.0002 0.964
Agreeableness					-0.008 0.175
Conscientiousness					0.007 0.167
Neuroticism					-0.002 0.685
Openness					0.0002 0.963
Machiavelli					0.0002 0.927
Self-Monitoring					0.006 0.430
Self-Esteem					0.001 0.793
CFC					-0.005** 0.022
Constant	0.693*** <0.001	0.537*** <0.001	0.525*** <0.001	1.288 0.405	2.808 0.260
LR	10.59	15.41	12.71	19.91	28.88
N.	441	441	441	441	441

The coefficients are marginal effects. Intolerance equals 1 if intolerant to alcohol, 0 otherwise. Gender equals 1 for male and 0 for female. Regular equals 1 if the exposure to drinking environment is monthly or higher, 0 otherwise. All the other variables are as described in Table S1. Bold italics indicate p-values. *, **, *** denotes statistical significance at the 10%, 5%, 1% level.

Stepwise Regression Logit Model Selection

A stepwise regression procedure adds variables to the regression model one-by-one, at each stage choosing to include the variable associated with the lowest p-value when added individually. As shown below, at the first stage this procedure adds “Gender”, and then at the second stage the model adds the three-way interaction. Following this, no variable achieves significance sufficient to be included.

Table S5. Stepwise Regression Logit Model Selection

Table S5A. Model Includes a Constant

Gender	0.130***					
	0.002					
Intolerant		-.037				
		0.417				
Regular			-.011			
			0.792			
Intolerant*Gender				-0.020		
				0.701		
Intolerant*Regular					-0.097	
					0.121	
Gender*Regular						0.024
						0.601
Intolerant*Gender*Regular						-0.078
						0.258

Table S5B. Model Includes a Constant and Gender

Intolerant	-.059					
	0.214					
Regular		-0.061				
		0.199				
Intolerant*Gender			-0.152**			
			0.031			
Intolerant*Regular				-0.151**		
				0.025		
Gender*Regular					-0.144*	
					0.063	
Intolerant*Gender*Regular						-0.189**
						0.020

Table S5C. Model Includes a Constant, Gender and Intolerant*Gender*Regular

Intolerant	-.009					
	0.870					
Regular		-0.030				
		0.543				
Intolerant*Gender			-0.043			
			0.667			
Intolerant*Regular				-0.065		
				0.584		
Gender*Regular					-0.085	
					0.316	

Dependent variable: Self-reported die number 3,4,5=1; 1,2,6=0. The coefficients are marginal effects.

Bold italics indicate p-values. *, **, *** denotes statistical significance at the 10%, 5%, 1% level.

Disaggregated Analyses

Our primary analysis aggregates die-roll outcomes into high-payoff and low-payoff because doing so provides a statistically powerful way to detect cheating while simultaneously allowing us to remain agnostic over how people cheat (this is important, because our design neither allows us to determine whether any specific individual cheated, nor how any cheating occurs). Suppose, for example, that all participants cheat by reporting a payoff level one greater than they actually rolled (unless they roll the highest, in which case they report the highest). With this type of cheating, the reports of 1, 2, 3 and 4 would (in expectation) be 1/6 each, while 5 (the highest payoff) would be 2/6 and 6 (the lowest payoff) would be 0. Note that cheating is visible only in the extremes, while the middle frequencies are as would occur without cheating. Consequently, procedures that look for evidence of cheating within the middle-range of numbers may underestimate the significance of cheating. Adding to this complication is that not everybody will cheat, and not all who cheat will cheat in the same way. This argues for an aggregative analysis that assumes only that cheating, however it occurs, will result in more high-payoff than low-payoff numbers being reported.

To demonstrate how the power of the test changes as one changes the level of aggregation, we re-analyzed our data at two different aggregation levels, and reported the results below in Tables S6 and S7. In Table S6, we aggregate by the two lowest payoffs, two middle payoffs and two highest payoffs. In this case we continue to obtain statistical significance of the hypothesized three-way interaction, albeit at a lower significance level. Next, Table S7 provides the results from a full disaggregation of the dependent variable. In this case the three-way interaction is no longer significant, though one observes that qualitatively the results remain unchanged.

Table S6 Ordered Logit Regression of Decisions to Report a Higher Payoff Number (partial aggregation of die roll outcome)

Dependent variable: recode of dice number(1,6→1, 2,3→2, 4,5→3)					
Gender	0.667*** 0.001	0.974*** 0.004	0.636*** 0.002	0.508** 0.014	0.540** 0.012
Intolerant	-0.147 0.464				
Regular	-0.373* 0.060				
Intolerant*Gender		-0.093 0.805			
Intolerant*Regular		-0.245 0.501			
Gender*Regular		-0.561* 0.092			
Intolerant*Gender*Regular			-0.496 0.103	-0.512* 0.096	-0.556* 0.078
Age				-0.033 0.609	-0.020 0.772
Altruism				-0.080*** 0.002	-0.074*** 0.006
Risk				0.030 0.151	0.027 0.220
Extraversion					-0.003 0.872
Agreeableness					-0.018 0.447
Conscientiousness					0.030 0.140
Neuroticism					-0.017 0.377
Openness					0.027 0.102
Machiavelli					0.001 0.928
Self-Monitoring					0.045 0.150
Self-Esteem					0.031* 0.095
CFC					-0.015* 0.074
LR	11.77	13.97	10.30	23.38	35.19
N.	441	441	441	441	441

Table S7 Ordered Logit Regression of Number Reporting Decisions (full disaggregation)

Dependent variable: recode of dice number(6→1, 1→2, 2→3, 3→4, 4→5, 5→6)					
Gender	0.523*** 0.004	0.642** 0.020	0.522*** 0.004	0.369* 0.050	0.371* 0.055
Intolerant	-0.099 0.590				
Regular	-0.162 0.366				
Intolerant*Gender		-0.131 0.681			
Intolerant*Regular		-0.193 0.551			
Gender*Regular		-0.171 0.538			
Intolerant*Gender*Regular			-0.290 0.311	-0.260 0.365	-0.276 0.347
Age				-0.037 0.528	-0.029 0.637
Altruism				-0.061*** 0.009	-0.052** 0.033
Risk				0.050** 0.010	0.049** 0.012
Extraversion					-0.006 0.730
Agreeableness					-0.012 0.585
Conscientiousness					0.024 0.195
Neuroticism					-0.013 0.469
Openness					0.018 0.238
Machiavelli					0.004 0.578
Self-Monitoring					0.030 0.248
Self-Esteem					0.012 0.505
CFC					-0.017** 0.023
LR	8.31	9.46	8.23	23.09	32.87
N.	441	441	441	441	441

* denotes statistical significance at the 10% level, ** at the 5% level, *** at the 1% level.

Slope Test

An extension of Hypothesis 2, which we denote Hypothesis 2a, is that the difference in self-control between intolerant males regularly and rarely exposed to alcohol environments should be greater than the difference in self-control between tolerant males regularly and rarely exposed to alcohol environments. This “difference-in-differences” prediction can be examined using “slope test” procedures suggested by Dawson (28) and Dawson and Richter (29). Slope-tests can be a valuable aid to interpreting interaction effects discovered in exploratory analyses, and can also be used effectively in the presence of theory-driven hypothesis testing.

Slope-tests can be conducted using ordinary least squares regressions that include main effects and interactions as well as various controls. Evidence in favor of an effect is found if the hypothesized interaction is significant. To conduct a slope test of Hypothesis 2a we regressed frequency of high payoff reports on the variables Intolerant, Regular and their interaction, using Age as a control.[†] Results are provided in Table S8, revealing a significant interaction effect.[‡]

Table S8 Slope test of Hypothesis 2a	
Dependent variable: self-reported die number	
3,4,5=1; 1,2,6=0	
Intolerant	-0.096** 0.010
Regular	-0.105*** 0.004
Intolerant* Regular	-0.038** 0.018
Age	-0.026* 0.071
Constant	1.387** 0.027
R-squared	0.044
N.	223

Bold italics indicate p-values. *, **, *** denotes statistical significance at the 10%, 5%, 1% level.

[†] Our specification includes robust standard errors (clustering by Intolerant) with p-values computed using the procedure indicated by Cameron and Miller (30, section VI D).

[‡] The significance of the interaction is robust to the inclusion of additional controls, though the significance of “Intolerant” and “Regular” is not. For example, including Age, Altruism, Risk, Peer Comparison and Home Province leads Intolerant and Regular to become insignificant (for both, $p > 0.15$) while their interaction remains (marginally) significant ($p < 0.10$).

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Supplemental Instructions, Tasks and Surveys (*Translated from Chinese*)
Part 1: Instructions for the decision tasks

General Instructions

Hello, everyone! Thank you for taking part in this experiment. This is an economic experiment. You have already earned 5 RMB for attending today's session. You now have an opportunity to earn more money according to the decisions you make, and any money that you earn with will be yours to take home in cash. Financial support for this research is provided by George Mason University and Central South University.

Please listen to the instructions carefully as this affects your payoffs. If you do not understand today's experiment, you will not be able to participate effectively. Talking or interacting with cellphones is not allowed during the experiment. If you have any questions please raise your hand and the experimenter will come to you privately. Please do not look at other players' decisions and please stay at your seat while waiting during the experiment.

You will complete four decision tasks in this experiment. Following these tasks we would like you to answer a questionnaire; please take your time and answer as honestly and as accurately as possible. The experiment will last for about 2 hours.

The results of today's experiment will be used only for the purpose of scientific research, and your identity will not be connected to your decisions.

When everyone is ready, we will begin the decision tasks.

Player ID: _____

Instructions for Cheating Task

In this task, you will receive a payoff by throwing a six-sided die. You may roll the die as many times as you wish on your own, but only your **first throw** decides how much you receive, you can see the exact payoff from the following chart. The die is “fair”, which means each number should be equally likely. You can throw many times to make sure that the die is working property.

Number thrown	1	2	3	4	5	6
Resulting payoff	5 Yuan	10Yuan	15Yuan	20Yuan	25Yuan	0Yuan

Please answer the following question:

You have thrown the die three times, the number you thrown are 2, 6 and 3sequently, how much will you receive in this case?

Your answer is _____Yuan

After you finish the question, an experimenter will come to check your answer.

Next the experimenter will give each of you a die. Please do not roll the die until you are told to do so. Roll as many times as you like privately and remember the number of the first throw.

Please record the number of your first throw below which will decide your payoff in this task.

The number of your first throw is _____

Please put the instruction into the envelope after recording the number. The experimenter will come and collect the envelopes and the dice.

Player ID: _____

Paired Player ID: _____

Instructions for the Dictator Game

We are about to begin the next task, please listen to the instructions carefully.

In this task, each of you will be paired with another player in this room randomly, but you will never know who the paired person is either during or after the experiment.

20 Yuan will be shared between a sender and a receiver. The sender decides how much (between 0 and 20 Yuan) will be sent to the receiver and the remainder is kept for herself (himself). After the sender makes the decision, the game is over.

Who is sender who is receiver will be decided randomly. For now, everyone should make a decision as though they are a sender. Overall, half of people will be senders and half receivers.

Please answer the following two questions.

1. You are chosen to be the sender. You decided to send 12Yuan to the receiver.
In this case, your payoff is _____Yuan, and your paired player's payoff is _____Yuan.

2. You are chosen to be the receiver. Your paired player decided to send 4Yuan to the receiver.
In this case, your payoff is _____Yuan, and your paired player's payoff is _____Yuan.

The experimenter will now check your answers.

Remember these are just two examples, you decision is up to you.

Now please make **your decision**.

Playing as a sender, the amount you send to the paired player is _____Yuan.

Now our experimenter will randomly assign sender and receiver roles, and your payoff will be realized.

You are: Sender ☐ Receiver ☐

Your payoff in this task is: _____Yuan

Please put the instructions into the envelope, the experimenter will take it.

Player ID: _____

Instructions for risk preference task

Please listen to the instructions carefully.

In this task, you are endowed with 30 Yuan and asked to choose the portion of this amount (between 0 and 30Yuan, inclusive) that you wish to invest in a risky asset. Any money not invested is yours to keep.

The risky asset:

There is a 50% chance that the investment in the risky asset will be successful. If it is successful, you receive 3 times the amount you chose to invest; if the investment is unsuccessful, you lose the amount invested. After your decision, we will flip a coin in front of you to determine whether your investment is successful or unsuccessful. Before flipping the coin you call for heads or tails, and if you are right your investment is successful, and if not your investment is failed.

Please answer the following questions:

1. You invest 0 Yuan in the risky asset. The most money you can earn in this task is _____Yuan.
2. You invest 30 Yuan to the risky asset, and your investment turns to be successful, so the amount of money you earn is _____Yuan.
3. You invest 30 Yuan to the risky asset, and your investment turns to be unsuccessful, So the amount of money you earn is _____Yuan.
4. You invest 15 Yuan to the risky asset, and your investment turns to be successful, so the amount of money you earn is _____Yuan.

The experimenter will now check your answers.

Remember, these are just examples, your decision is totally up to you.

Now please make **your decision**:

The amount of money you decide to invest in the risky asset is _____Yuan

The experimenter will now come to you to flip the coin.

Your guess is: Heads ☐ Tails ☐

The result is: Heads ☐ Tails ☐

After recording the flipping result, please put the instructions into the envelope, the experimenter will take it

Player ID: _____

Instructions for time preference task1

Please listen to the instructions carefully.

After you have finished making decisions in today's experiment, you will be asked to answer a questionnaire. You will be paid in two parts for completing this questionnaire. The first part of this payoff will be paid to you tomorrow, and the other part will be paid to you in two weeks. You can decide how much to be paid tomorrow and how much to be paid in two weeks according to the table below. You can choose whichever payoff option you like.

Payment tomorrow(Yuan)	20	16	12	8	4	0
Payment in two weeks(Yuan)	0	6	12	18	24	30

For payments in two weeks, you can pick it up from us on campus, or we can transfer it to your bank account if you would like to leave your bank account information with us. Your information will only be seen by researchers on this project. We guarantee the money you earn will be available to you tomorrow and/or in two weeks. At the end of the experiment we will give you a card with our contact information. If any of your payment is not received please contact us immediately.

Please answer the following question.

Say you choose the third alternative. In this case your total payoff in this task is _____ Yuan, and you will receive _____ Yuan tomorrow, and _____ Yuan in two weeks.

Now please make **your decision**. Please mark a square in the table below, remembering you need to choose one and **only one** from the six choices below.

Payment tomorrow(Yuan)	20	16	12	8	4	0
Payment in two weeks(Yuan)	0	6	12	18	24	30
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This is the end of this task. Please put this instruction into the provided envelope and the experimenter will come and take it from you

Player ID: _____

Instructions for time preference task2

We are about to begin the fourth task, please listen to the instructions carefully.

In this task, half of the participants will be randomly chosen to receive an amount of payoff. For those who are chosen to be paid, the payoff will be paid to you tomorrow or in one month depend on your choice. You need to choose between Option A (pay tomorrow) and Option B (pay in one month) in each of the ten items showing in the table below. If you choose Option A you will receive 50Yuan tomorrow, if you choose Option B you will receive larger amount in one month but different in the ten items. When you finish the task, we will randomly choose one out of the ten items and pay you accordingly.

Items	Option A Pay tomorrow	Option B Pay in one month	Decision Tick A or B	
1	50Yuan	52Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
2	50Yuan	54Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
3	50Yuan	56Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
4	50Yuan	58Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
5	50Yuan	60Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
6	50Yuan	62Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
7	50Yuan	64Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
8	50Yuan	66Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
9	50Yuan	68Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>
10	50Yuan	70Yuan	A <input type="checkbox"/>	B <input type="checkbox"/>

To receive your payoff, we offer three alternative ways:

1. You can come to our office to pick it up
2. We can transfer it to your “WeChat” or “AliPay” account if you would like to leave your “WeChat” or “AliPay” account number with us.
3. We can transfer it to your bank account if you would like to leave your bank account number with us.

Your information will only be seen by me and my assistant. We guarantee that the payments for your chosen option will come to you tomorrow or in one month. At the end of the experiment we will give you a card with my contact information; please contact me if you do not receive your payments.

Please complete the following **question**:

1. Everybody will receive a certain amount of payoff in this task.

☐ Yes ☐ No

2. What is your payoff in this task?

☐ Sum of the ten items ☐ An randomly chosen item

3. If you choose A in the second item, finally this item is randomly chosen to be paid, in this case what is your payoff in this task?

Receive tomorrow _____ Yuan Receive in two weeks _____ Yuan

4. If you choose B in the eighth item, finally this item is randomly chosen to be paid, in this case what is your payoff in this task?

Receive tomorrow _____ Yuan Receive in two weeks _____ Yuan

Once you have finished the question, the experimenter will come by to check if you have the right answers. Remember, these are just examples, your decision is totally up to you.

Then you will make **your decision**. Please notice that any one of your choices has the possibility to determine your payoff in this task.

When all of you finish making the decision, this task is over. The randomly chosen payment item will be announced.

You are chosen to be paid in this task? ☐ Yes ☐ No

The random chosen item to be paid is _____

This is the end of this task. Please put this instruction into the provided envelope and the experimenter will come and take it from you.

Player ID: _____

Instructions for ambiguity aversion task

In this task, you have a chance to win 15 Yuan by guessing the color of a ball.

There are two urns, each contains 100 balls.

Urn A contains 50 red balls and 50 black balls

Urn B contains 100 red and black balls, but the number of red balls and black balls are unknown to you.

You need to draw a ball from one of the two urns. You can decide which urn to draw from. Before drawing the ball you need to guess the color of the ball you will draw.

If the color of the ball that you draw is the same as your guess, you earn 15 Yuan, otherwise you earn zero for this task.

The color you guess is: ☐ Red ☐ Black

You choose to draw the ball from: ☐ Urn A ☐ Urn B

Now the experimenter will bring the urn you chose to you. Please remain quiet as you draw a ball.

The color of the ball you drew is: ☐ Red ☐ Black

After recording the drawing result, please put the instructions into the envelope, the experimenter will take it.

Part 2 Survey Questions

1.Demographic information

<input type="text"/>	Subject ID
<input type="text"/>	Age
<input type="text"/>	Sex (M or F)
<input type="text"/>	Year (1, 2, 3, 4)
<input type="text"/>	Ethnic group
<input type="text"/>	Major
<input type="text"/>	Hometown(Province)

2. Personal Habits

1. Do you develop facial flushing immediately after drinking a glass (about 180 ml) of beer?

☐

Yes

☐

No

2. Do you develop facial flushing immediately after drinking a glass of beer in the first one or two years after you started drinking?

☐

Yes

☐

No

3. How often do you drink alcohol?

☐

Every day

☐

Every week

☐

Every month

☐

Every year

☐

Never

4. Can you drink more alcohol than other people you know?

☐

Yes

☐

No

5. Do you drink milk?

☐

Yes

☐

No

6. Are you allergic to milk?

☐

Yes

☐

No

7. How often do you play mahjong?

☐

Every day

☐

Every week

☐

Every month

☐

Every year

☐

Never

3. Machiavelli personality test

For each of the statements below, write down your level of agreement using the following scale: 7 = Strongly agree; 6 = Somewhat agree; 5 = Slightly agree; 4 = No opinion; 3 = Slightly disagree; 2 = Somewhat disagree; 1 = Strongly disagree.

- ☐ 1. Never tell anyone the real reason you did something unless it is useful to do so.
- ☐ 2. The best way to handle people is to tell them what they want to hear.
- ☐ 3. One should take action only when sure it is morally right.
- ☐ 4. Most people are basically good and kind.
- ☐ 5. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
- ☐ 6. Honesty is the best policy in all cases.
- ☐ 7. There is no excuse for lying to someone else.
- ☐ 8. It is hard to get ahead without cutting corners here and there.
- ☐ 9. All in all, it is better to be humble and honest than important and dishonest.
- ☐ 10. When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons that carry more weight.
- ☐ 11. Most people who get ahead in the world lead clean, moral lives.
- ☐ 12. Anyone who completely trusts anyone else is asking for trouble.

- ☐ 13. The biggest difference between most criminals and other people is that criminals are stupid enough to get caught.
- ☐ 14. Most men are brave.
- ☐ 15. It is wise to flatter important people.
- ☐ 16. It is possible to be good in all respects.
- ☐ 17. Barnum was very wrong when he said that there's a sucker born every minute.
- ☐ 18. Generally speaking, men won't work hard unless they're forced to do so.
- ☐ 19. People suffering from incurable diseases should have the choice of being put painlessly to death.
- ☐ 20. Most men forget more easily the death of their father than the loss of their property.

4. Self-Monitoring Scale

The statements below concern your personal reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. If a statement is true or mostly true as applied to you, write “1” in the blank to the left of that item. If a statement is false or not usually true as applied to you, write “0” in the blank to the left of that item.

Remember: 1 = TRUE, 0 = FALSE

- ☐ 1 I find it hard to imitate the behavior of others.
- ☐ 2 At parties and social gatherings, I do not attempt to do or say things that others will like.
- ☐ 3 I can only argue for ideas which I already believe.
- ☐ 4 I can make impromptu speeches even on topics about which I have almost no information.
- ☐ 5 I guess I put on a show to impress or entertain others.
- ☐ 6 I would probably make a good actor.
- ☐ 7 In a group of people I am rarely the center of attention.
- ☐ 8 In different situations and with different people, I often act like very different persons.
- ☐ 9 I am not particularly good at making other people like me.
- ☐ 10 I'm not always the person I appear to be.
- ☐ 11 I would not change my opinions (or the way I do things) in order to please

someone or win their favor.

- ☐ 12 I have considered being an entertainer.
- ☐ 13 I have never been good at games like charades or improvisational acting.
- ☐ 14 I have trouble changing my behavior to suit different people and different situations.
- ☐ 15 At a party I let others keep the jokes and stories going.
- ☐ 16 I feel a bit awkward in public and do not show up quite as well as I should.
- ☐ 17 I can look anyone in the eye and tell a lie with a straight face (if for a right end).
- ☐ 18 I may deceive people by being friendly when I really dislike them.

5. Rosenberg's Self-Esteem Scale

For each of the statements below, write down your level of agreement using the following scale: 1 = Agree very much; 2 = Agree; 3 = Neither agree nor disagree; 4 = Disagree; 5 = Disagree very much.

- ☐ 1. At times I think I am no good at all.
- ☐ 2. I take a positive view of myself.
- ☐ 3. All in all, I am inclined to feel that I am a failure.
- ☐ 4. I wish I could have more respect for myself.
- ☐ 5. I am able to do things as well as most other people.
- ☐ 6. I feel that I am a person of worth, at least on an equal plane with others.
- ☐ 7. On the whole, I am satisfied with myself.
- ☐ 8. I feel I do not have much to be proud of.
- ☐ 9. I feel that I have a number of good qualities.
- ☐ 10. I certainly feel useless at times.

6. Consideration of Future Consequences Test

For each of the statements shown, please indicate whether or not the statement is characteristic of you. If the statement is extremely uncharacteristic of you (not at all like you) please write a "1" ; if the statement is extremely characteristic of you (very much like you) please write a "7" . And, of course, use the numbers in the middle if you fall between the extremes

- ☐ 1. I consider how things might be in the future, and try to influence those things with my day to day behavior.
- ☐ 2. Often I engage in a particular behavior in order to achieve outcomes that may not result for many years.
- ☐ 3. I only act to satisfy immediate concerns, figuring the future will take care of itself.
- ☐ 4. My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions.
- ☐ 5. My convenience is a big factor in the decisions I make or the actions I take.
- ☐ 6. I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes.
- ☐ 7. I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years.
- ☐ 8. I think it is more important to perform a behavior with important distant consequences than a behavior with less important immediate consequences.
- ☐ 9. I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level.
- ☐ 10. I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time.
- ☐ 11. I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date.

- ☐ 12. Since my day to day work has specific outcomes, it is more important to me than behavior that has distant outcomes.
- ☐ 13. When I make a decision, I think about how it might affect me in the future.
- ☐ 14. My behavior is generally influenced by future consequences.

7. Big 5 Personality Test

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please choose a number for each statement to indicate the extent to which you agree or disagree with that statement in this following scale: 1 = Disagree strongly; 2 = Disagree a little; 3 = Neither agree nor disagree; 4 = Agree a little; 5 = Agree strongly.

I see myself as *someone who...*

- ☐ 1. is talkative.
- ☐ 2. tends to find fault with others.
- ☐ 3. does a thorough job.
- ☐ 4. is depressed, blue.
- ☐ 5. is original, comes up with new ideas.
- ☐ 6. is reserved
- ☐ 7. is helpful and unselfish with others.
- ☐ 8. can be somewhat careless.
- ☐ 9. is relaxed, handles stress well.
- ☐ 10. is curious about many different things.
- ☐ 11. is full of energy.
- ☐ 12. starts quarrels with others.
- ☐ 13. is a reliable worker.
- ☐ 14. can be tense.
- ☐ 15. is ingenious, a deep thinker.
- ☐ 16. generates a lot of enthusiasm.

- ☐ 17. has a forgiving nature.
- ☐ 18. tends to be disorganized.
- ☐ 19. worries a lot.
- ☐ 20. has an active imagination.
- ☐ 21. tends to be quiet.
- ☐ 22. is generally trusting.
- ☐ 23. tends to be lazy.
- ☐ 24. is emotionally stable, not easily upset.
- ☐ 25. is inventive.
- ☐ 26. has an assertive personality.
- ☐ 27. can be cold and aloof.
- ☐ 28. perseveres until the task is finished.
- ☐ 29. can be moody.
- ☐ 30. values artistic, aesthetic experiences.
- ☐ 31. is sometimes shy, inhibited.
- ☐ 32. is considerate and kind to almost everyone.
- ☐ 33. does things efficiently.
- ☐ 34. remains calm in tense situations.
- ☐ 35. prefers work that is routine.
- ☐ 36. is outgoing, sociable.
- ☐ 37. is sometimes rude to others.
- ☐ 38. makes plans and follows through with them.
- ☐ 39. gets nervous easily.

- ☐ 40. likes to reflect, play with ideas.
- ☐ 41. has few artistic interests.
- ☐ 42. likes to cooperate with others.
- ☐ 43. is easily distracted.
- ☐ 44. is sophisticated in art, music, or literature.

Part 3. Follow-up survey questions

1. How often are you around people drinking alcohol (regardless whether you chose to drink)?

every day every week every month every year never

2. Do you avoid attending events where alcohol will be consumed?

Yes No

3. When around people drinking alcohol, do you usually decide to drink or usually decide not to drink?

Decide to drink Decide not to drink

4. Compared to your past behavior, has the frequency with which you drink alcohol changed?

Drink more frequently No change Drink less frequently

5. Which of the following statements is most true about you.

Generally speaking, when I am out and after I have had one alcoholic drink:

- (i) I give little thought to the pace at which I'm drinking (or not drinking) alcohol*
- (ii) I use self-control to reduce the pace at which I drink alcohol*
- (iii) I become more eager to drink alcohol and drink faster*